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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/822,300 03/23/2001 Georg Muenzel 00 P 7515 US 01 8037

7590 02/14/2007  
Siemens Corporation  
Intellectual Property Department  
186 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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VU, TUAN A

ART UNIT	PAPER NUMBER
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2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS 02/14/2007 PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/822,300		MUENZEL, GEORG	
	<b>Examiner</b>		<b>Art Unit</b>	
	Tuan A. Vu		2193	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/20/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is responsive to the Applicant's response filed 12/20/06.

As indicated in Applicant's response, no claims have been amended. Claims 1-52 are pending in the office action.

### ***Claim Objections***

2. Claims 1, 19, 36, 39, 41, 44, 51 are objected to for the following phraseology: 'industrial automation computer program *adapted for controlling* a programmable logic controller'. If weight were to be given to the automation control program, the reciting of 'adapted for controlling' does not allow it to happen, that is, such phraseology does not establish a patentable weight to the purpose of the automation program or its intended controller functionality, lacking details anywhere in the claims as to further characterize what are recited as 'industrial automation program' and 'controlling a programmable logic controller'. As a whole, the above limitation remains an intended use and is given no patentable weight; that is, the phrase 'adapted for' is a vague language that lacks substance as to what is being done, absent any specific step describing how a intended target ( a programmable logic controller) is being controlled. The above 'for controlling' limitation will be treated as though a programmable logic controller (PLC) can be a target for the applying any form or automation/control/design based on the recited control/automation program, and the specificity about such controlling process (if any) is not being given any weight or be entitled for proper merits.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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4. Claims 36-38, 44-49, 51-52 are rejected under 35 U.S.C. 101 because the claims are directed to a non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a “useful, concrete, and tangible result” be accomplished. An “abstract idea” when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a “useful, concrete and tangible result”.

Claim 36 recites a storage medium having stored thereon an executable markup language version of an automation control program, such computer program *adapted for* controlling a programmable logic controller, and created using a graphical program language. The claim does not recite any data transformation or action step resulting from putting the executable markup version into practical use (like execution via a computer to implement an application or a method) so to reasonably convey that data transformation action would yield a useful, concrete, tangible result as required by the Practical Application Test requirement from above. As a whole, the claim fails to reasonably yield a real-world result as set forth above, as a consequence of actual actions taken and operating on the readable medium storage and the markup version so to have its content usefully externalized by the corresponding application environment. Further, the recited automation program code is recited as being *adapted for* controlling some controller, but this is insufficient to show the realization of any actions being taken so to yield any form of result; that is, ‘adapted for’ merely entails that some potential functionality exists but remains statically potent or non-actualized. Merely descriptive elements are statutorily non-practical per se, thus basically amounting to abstract entities. As a whole the claim is limited to listing abstract concepts purported for what appears to be but an abstract representation standing for an

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intended use (emphasis added on 'for controlling' as a intended use). Hence, the claim is rejected for leading to a non-statutory subject matter.

Claims 37-38 recite network/communication context amounting to non-functional and descriptive limitations; thus are also rejected for failing to remedy to the deficiencies of the base claim.

Claim 44 recites a method for providing industrial automation program comprising accepting a markup version of the automation program which is adapted for controlling a PLC; transmitting the markup version over the network causing the markup version to be received. As a whole, the method amounts to transmitting a markup version of another program that is *adapted* for controlling a PLC. There is no indication that the reception of the markup version leads to any specific and actual application usage --via real interaction or action steps -- of the markup version or the control program (e.g. derivation a executable therefrom) as well as executing the automation program ( Note: a program adapted to does not establish a actual action but merely implies a potential functionality) so that a useful, real-world application result is deemed reasonably generated from executing such program. Similarly, claims 45-49 recite network transmission amounting to non-functional descriptive limitations without conveying any application result based on actual interaction steps taken to make use of transmitted program, i.e. to carry out the functionality of the markup version or making specific use of the act of receiving such version.

Claims 44-49 amounts to absence of steps taken to interact the network elements using the (transmitted) program being received, hence do not reasonably convey the realization of a

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real-world useful, tangible result; and thus are rejected for leading to non-statutory subject matter.

Claim 51 amounts to description of network computer for receiving a markup version of a automation control program adapted for some controlling function, the markup version described as previously converted from a graphical programming. As a whole, the claim amounts to receiving of a entity perceived as descriptive non-functional limitation, absent any step taken to realize the purpose of such entity; and like in claim 36 or 44, the claim fails to convey real step action to interact the described non-functional elements in order to yield a Practical Application real-world tangible result. Claims 51-52 are rejected for leading to non-statutory subject matter.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 provides for the use of a automation control program ( *adapted for* controlling a PLC), but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. Dependent claims 37-38 fail to further the inventive steps involved in applying the markup version of the control computer program and are also rejected for the same reasons.

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Claims 36-38 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. The reciting of 'computer program' for 'controlling' (re claim 36) appears preemptive over any prior art of related field, and this is not sufficiently presenting distinguishing feature with respect thereto. This claim 36 is an omnibus type claim; and will be treated without proper merits in regard to such preemptive violation of the above way of claiming a feature.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 10-12, 14-26, 28-30, 32-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dole, USPN: 6,634,008, in view of the admitted prior art ( hereinafter APA-- see Background of Invention, pg. 1-2 of Specifications)

As per claim 1, Dole discloses a method for representing industrial automation computer program code created using a graphical programming language (e.g. col. 8, lines 22-32), the method comprising:



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identifying an internal representation of an industrial automation computer program (e.g. *files and libraries, file defining methodologies... executable methodologies* - col. 7, lines 14-49; *Verilog file* - col. 8, lines 25-32; col. 8, line 63 to col. 9, line 19; col. 10, lines 32-56; col. 13, line 43 to col. 14, line 15; *netlist* - col. 14, lines 42-47; step 503 - Fig. 8; Fig. 11-12; *job steps, chain job* - col. 16, lines 5-9; col. 16, lines 53-55 - Note: all files generated from the EDA tool reads on internal representation of the automation program), the internal representation created via a graphical programming language (e.g. col. 8, lines 22-32; col. 5, lines 11-21; step 503 - Fig. 8); and

converting the internal representation to a markup language version of the code industrial automation computer program (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). At the time the invention was made, embedding complex system in a single chip - IC - such as endeavored by Dole ( see Dole: *system-on-chip* - BACKGROUND) such that complex controlling micro chip devices, e.g. integrated circuits or microcontroller being a field for developers to develop automation control code to test their functions was a known concept. Dole methodology to design complex controller chip wherein design is based on graphical selection regarding chip related functions or architecture ( see *place and route* -Fig. 9; tool selection -Fig. 10; *verilog* - Fig. 11; *chip home page* - col. 15, lines 40-62) is thus further evidenced by APA; that is, APA discloses that graphical design by engineers can be supported by graphical programming languages that enable specify control logic of programmable logic controller (PLC - see Specifications , pg. 1). APA is teaching the same line



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of industrial type of design and/or circuits building/controlling as Dole -- that is, in view of the web based and graphic-based tool/methodologies by Dole to. The graphical programming concept is evidenced in Dole's developing of industrial type of design via using graphical tool and methodologies, wherein complex chip(IC) logic or controller functionality can be targeted for being modeled and graphically designed ( see Dole: Fig. 28; *Tool 1405* Fig. 5; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 -- Note: graphically assembling of blocks and execution of the control flow of components in a circuit design reads on graphical programming ). Based on the fact that one such microcontroller IC type design or complex controller device being such target can be a PLC as set forth by APA from above, it would have been obvious for one of ordinary skill in the art at the time the invention was made to apply circuit synthesis tool, control data communication and web markup conversion as taught by Dole so that the target to be designed would be a control logic of a integrated chip or single controller having control functionality of a PLC such as taught by APA. One would be motivated to do so because the internet based control applied to industrial design and control as endeavor by both Dole using this framework to implement industrial design, programming and testing of a PLC as by APA would enable hardware modeling and design such IC controller as perceived in Dole to put into use the very usefulness of a PLC using the possibilities from a computer technology to implement the graphical programming as set forth above (see APA, pg. 1) and in Dole from above.

**As per claims 2-3,** Dole discloses storage of the markup language version of the industrial automation computer program to be stored in computer storage device ( e.g. *XML files*

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– col. 16, line 21-67) for transmission and being displayed for editing discloses inherent storage for transport across the internet (e.g. Fig. 5).

**As per claims 4 and 5**, Dole discloses converting the markup-formatted code of the industrial automation computer program to the internal representation in computer memory as a corresponding graphical programming language version the industrial automation computer program ( e.g. step 527 – Fig. 13; Fig. 17-23; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 – Note: executing markup file via file decompression to restore *DAG or chip/block or Netlist* based synthesis files defining a circuitry job chain reads on converting back into corresponding graphical programming language).

**As per claims 6-7**, Dole discloses Fig. 5 and XML (e.g. col. 16, line 10-67).

**As per claims 8 and 10-11**, Dole discloses *step-by-step flows* and *schematic* for a circuit design being documented (e.g. col. 5, lines 11-16; col. 12, lines 5-48); hence has disclosed a graphical language comprising flowchart language and sequential flow chart (*DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23) and block diagram language (e.g. step 405-407 – Fig. 9; col. 12, lines 42-55; Fig. 8, Fig. 19, 28 – Note: *model* and *physical layout* of IC in a circuit as well as UI manipulating of block flow – see col. 5, lines 11-32 - reads on block diagram graphical type of language).

**As per claims 12 and 14-15**, Dole discloses modeling (e.g. *synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; col. 15, lines 20-47; *Flow/steps 1119* -Fig. 10; Fig. 23); hence has disclosed graphical language comprising a flowchart, block diagram, and function diagram ( re claims 8, 10-11) being converted into markup language and decompressed therefrom ( re claims 4-5).

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**As per claim 16**, Dole discloses a tool with editor command (e.g. col. 13, lines 22-44; Fig. 4, 10, 12).

**As per claim 17**, Dole discloses executing circuit of design block from the XML language in corresponding graphical language version of the industrial automation computer program (e.g. step 527 – Fig. 13; Fig. 17-23; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 – refer to rationale of claim 5).

**As per claim 18**, see Dole's browser use ( Fig. 5).

**As per claim 19**, this is a computer product with computer-readable medium (see Dole: col. 28, lines 6-8) for performing the same steps limitations recited respectively in claim 1; hence is rejected with the corresponding rejections as set forth in claim 1, including the rationale to address the PLC controlling function of industrial automation computer program limitation.

**As per claims 20-23**, refer to the rejections of claims 2, 4, 3, 5, respectively.

**As per claims 25-26, and 28**, refer to claims 7-8, and 10, respectively.

**As per claims 24, 29 and 33**, refer to claims 6( for browser) and 11( for sequential chart), respectively.

**As per claims 30 and 32**, refer to claims 12, 15, respectively.

**As per claims 34-35**, refer to claims 17 and 16, respectively.

**As per claim 36**, Dole discloses computer-readable storage medium having stored thereon a representation of industrial automation program code as markup language version of the industrial automation computer program (e.g. col. 16, lines 10-47; Fig. 13), but Dole fails to teach that the program code is to control a programmable logic controller. However, the limitation as to this automation program adapted for an application such to control in a

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programmable logic controller (PLC) has been treated as obvious in view of the rationale as set forth in claim 1.

**As per claim 37**, see claim 7.

**As per claim 38**, Dole implicitly discloses coupling to remote computer system (e.g. Fig. 5).

**As per claim 39**, Dole discloses a computer program product for permitting a user to create industrial automation computer programs (e.g. col. 8, lines 22-32), the product comprising a computer-readable storage medium having a computer program code on it, the code comprising:

industrial automation graphical programming language code, an editor adapted to permit the user to create industrial automation computer program using graphical elements (e.g. *synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; *DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23; step 405-407 – Fig. 9; col. 12, lines 42-55),

the industrial automation graphical program being stored in an internal representation during execution (*files and libraries* - col. 7, lines 14-49; *Verilog file* – col. 8, lines 25-32; col. 8, line 63 to col. 9, line 19; col. 10, lines 32-56; col. 13, line 43 to col. 14, line 15; *netlist* – col. 14, lines 42-47; step 503 – Fig. 8; Fig. 11-12; *job steps, chain job* – col. 16, lines 5-9; col. 16, lines 53-55 ); and

program code for converting the industrial automation computer program thus stored in the internal representation to a markup language version of the industrial automation computer program (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13).

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Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

**As per claim 40**, Dole discloses converting industrial automation computer program from the markup language format to the internal representation ( see rejection of claim 4).

**As per claim 41**, Dole discloses a method for communicating the logical structure of software industrial automation control data in order to permit a plurality of application developers to create applications relating to the data, the method comprising:

creating a schema defining a content model for markup language version of an industrial automation computer program system (e.g. col. 7, lines 26-42; DTD – col. 16, lines 10-20; Fig. 13; col. 16, line 65 to col. 17, line 2) converted from a graphical language version of the industrial automation computer program (*synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; *DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23; step 405-407 – Fig. 9; col. 12, lines 42-55); and

posting the schema for access over the network by the application developers (e.g. Fig. 5; Fig. 13; DTD – col. 16, lines 10-20).

Dole does not explicitly disclose that the industrial automation control program is to control a programmable logic controller (PLC). However, this limitation has been addressed in claim 1.

**As per claims 42 and 43**, refer to claim 7-8, respectively.

**As per claim 44**, Dole discloses a method for providing software industrial automation computer program from a system of developers coupled in a network (Fig. 5, 13), the system comprising:

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accessing a markup language version of the industrial automation computer program (e.g. Fig. 10; col. 16, line 21-67), the markup language version of the computer program converted from a representation created using a graphical programming language (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13 – Note: using browser technologies to create CGI-script or XML DTD file reads on using graphical programming language);

transmitting the markup language version of the industrial automation computer program over the network in connection of a client system address, thereby causing the markup version of the industrial automation computer program to be received by the receiving system (e.g. Fig. 5, Fig. 13, 17-23).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

**As per claim 45**, Dole discloses client transmitting to the server data relating to the markup language version of the automation computer program, wherein the server has access to the modified industrial automation computer program in response thereto, the modified industrial automation computer program is provided in markup language version (e.g. Fig. 5-6; col. 15, line 58 to col. 16, line 4), and further comprising: transmitting the markup version modified industrial automation computer program to the client system address to be received by the client ( Fig. 5; Fig. 10 – Note: Fig. 10, steps 1115, 1117 versions to select and posted to developers reads on modified industrial automation computer program or methodologies version transmitted in markup language).

**As per claim 46**, Dole discloses modeling to support a business application programming scheme using a modeling tool (re claim 44) but fails to disclose using mail message for communications. Official notice is taken that in an enterprise wherein multiple users are connected via the enterprise network services such that network communication and data distribution help fulfill the enterprise business applications, the use electronic mail to communicate data or update information was a well-known concept at the time the invention was made. The providing of electronic mail to Dole's system so as to enable multiple developers to communicate with the common framework to retrieve markup-formatted control data would have been obvious in light of the benefits related to such type of communications as suggested by the well-known concept from above.

**As per claims 47 and 48**, see Dole (e.g. col. 16, line 21-67; Fig. 5, 13).

**As per claim 49**, this claim includes a variation of claim 44, such variation considered evident in that a client can be a first or a second client in Dole's HTML communication protocol and service rendered to requesting developers, and is rejected using the rationale set forth in claim 44 to address the transmitting of control data based on the network address of the first client system, because in view of the server/client paradigm ( Dole: Fig. 3-5), the markup language version is received by a first client and possibly a second client.

**As per claim 50**, this claim includes the same limitation of claim 4 or 40; and is rejected with the rationale used in claim 4 or 40 in conjunction with the rejection as set forth in claim 49; because in a network where markup data is distributed, rendering such data back into internal representation by a first, a second or a third client would be the same.



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**As per claim 51**, Dole discloses a method for industrial automation control applications, comprising:

providing a computer system coupled to a network (e.g. Fig. 5);

configuring a first computer to receive over the network transmissions of data from a plurality of industrial automation developer systems ( Fig. 3-5 ); and

receiving data from a the plurality of industrial automation computer program developer systems, the data comprising an industrial automation computer program in a markup language version (e.g. col. 16, line 21-67; step 527 – Fig. 13; Fig. 17-23 ), the markup language version of the computer program converted from a representation created using a graphical programming language (e.g. col. 7, lines 26-42; DTD – col. 16, lines 10-20 – Note: using browser technologies to create CGI-script or XML DTD file reads on using graphical programming language).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

**As per claim 52**, see claim 7.

9. Claims 9, 13, 27, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dole, USPN: 6,634,008, and APA, and further in view of Webb et al., 'Programming Logic Controllers' *Principles and Applications*, Prentice-Hall, 1995, chp. 3, pp. 41-54 ( hereinafter Webb)

**As per claim 9**, Dole does not teach graphical programming language comprising a ladder logic, but as evidenced by APA in enabling graphically programming a control of PLC, programming and modeling functionality of a ladder logic would have been as known a concept to designing a PLC, and this is evidenced by Webb (chp. 3). Therefore it would have been

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obvious for one skill in the art to enable the PLC program developing and graphical modeling based on the programming capabilities by Dole and APA (as set forth in claim 1) such that it utilizes programming of a PLC via a ladder logic program as taught by Webb because a ladder logic diagram and set up based on such graphical programming enable to detect improper flaws at each of controlling steps of a PLC ( see Webb: ch. 3-4, 3-5, 3-6), when the steps are programmed to test and develop the very functionality of the PLC as set forth by APA.

**As per claim 13**, this claim incorporates the rejection of claim 7; and would also include the rationale to the 'ladder logic' limitation obvious in view of the rejection of claim 9.

**As per claims 27 and 31**, these claims correspond to claims 9 and 13 respectively, hence are rejected using the same rationale as set forth therein, respectively.

#### ***Response to Arguments***

10. Applicant's arguments filed 12/20/2006 have been fully considered but they are not persuasive. Following are the corresponding Examiner's rebut in regard thereto.

#### **Rejection 35 USC §101:**

(A) Applicant has submitted that the use of 'encoded with a computer program' and 'executable markup language' is sufficient to be statutory ( Appl. Rmrks, pg. 3), just like 'adapted' followed by structural and functional interrelationship would permit the functionality to be realized (Appl. Rmrk, pg. 5), hence the claim would be statutorily proper. In reply, the rejection of USC 101 has set forth clearly as to why the phrase 'adapted for' such as recited does not contribute in establishing specific functionality being performed or carried out via concrete actions so to reasonably convey that some tangible real world entities would have resulted therefrom. The recitation of 'adapted for controlling' does not particularly shed specifics to how

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this 'controlling' amounts to in order to inform one skill in the art to be learned on any form of step action or transformation so to yield a tangible result; and as set forth above, such amendment does remedy a non-statutory type of deficiency; i.e. there is lack of actual and concrete step actions ( or reasonable specific teaching regarding thereto) using what appear to be the functionality of 'controlling', and this does not teach that at the end of such steps some object (in the domain of the application) being controlled reaches a concrete and useful state relative to a previous state existing prior to such controlling step is taken; such object state being deemed tangible and useful in the field of application as intended, as required per the Practical Application Test.

The rejection has set forth the reasons why it is deemed that as a whole the rejected claims do not fulfill a Practical Application: they do not reasonably convey action(s) being actually taken to realize the content or functionality of the markup version; nor do they recite how the markup version enables the automation program to carry out any controlling functionality in terms of tangible result being yielded; i.e. no real world result can be generated as a result of such deficiency.

The Applicant's arguments are hence insufficient to overcome the current rejection.

**Rejection 35 USC §103:**

(B) Applicants' points ( Appl. Rmrks, pg. 10-15) to rebut against the Hoskins reference are now moot in view of the new grounds of rejections.

(C) Applicants have submitted that Dole relates to 'integrated circuits' and 'designing and testing' thereof; and that claim 1 of the invention is about converting a internal representation of an automation program to a markup version of the automation program adapted for controlling a

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programmable logic controller ( Appl. Rmrks, pg. 16-18). The new grounds of rejection has addressed the PLC limitation; and in view of the lack of inventive steps recited in terms of the program controlling a PLC, the argument against Dole not disclosing a 'automation control program' will be treated as mere allegation that is based solely on terminology that enforces nothing more than but a superficial *intended use* without patentable weight ( and without proper due merits) or specific action steps supporting any form of actually recited patentable features/details. The Office Action has presented what is considered mapping a 'internal representation', a 'markup version', and a 'control program', none of which cited mappings using Dole has been directly rebutted with decisive and to-the-point counter arguments to attest to their impropriety or misuse. The pattern used by what appears to be Applicant's rebut resides in the 'where' statements; and the Examiner has not been able to acknowledge where the disagreement (by Applicants) against each of the cited portions lies in terms of specific technological (field of endeavor) details in regard to the very specific language of the claim. Establishing a prima facie case of rebut does not revolve around asking 'where' the cited parts are for a limitation; nor does it amount to pasting the entire Office Action without pointing out where the cited portions distinguish (in convincing and understandable terms) over the very language of a particular limitation ( emphasis added). The pattern proffered in the Applicant's response as relying solely on asking questions, and these questions are effected without pointing for each or most cited parts (set forth in any rejection) that are believed to raise a disagreement how the language of claimed feature distinguish over that particular referred to part of the reference (emphasis added). This does not help the Examiner perceive the difference so to reply on specifics of the grounds of rejection (being applied), and hopefully determine whether they

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would still stand (or not) in view of the specific points identified by the arguments as explained above. Setting up questions without specifically directing them to the parts being applied in Dole amount to mere allegations that the prior art used does not match the claims; and this is not sufficient. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

(D) As per the remarks presented against claims 2-18 (Appl. Rmrks, pg. 26-43), the pattern of Applicants' remarks are resumed from the previous pages; and can be summarized as: (i) pasting the Office Action, (ii) presenting the claim language, (iii) asserting that Dole does not teach some feature; (iv) asking where Dole discloses the claimed steps or features; (v) reciting the required steps taken (by an Examiner) for a obviousness prima facie case of rejection. These do not sufficiently amount to proper presentation of facts based on the referenced citations in Dole in regard to disagreeing with the corresponding claimed feature; and is referred back to section C above. It is urged that, instead of asking as in (iv), proper rebut should be formulating in terms of pointing to the cited portions corresponding to a particular feature, and doing so by laying out its weakness or inapposite teaching in language relevant to the field on the endeavor. The mere fact of asking where the prior art meets a claimed feature would be construed as asserting that nowhere (emphasis added) in the reference is taught any of the features claimed; and asserting that way (without identifying specific parts of the reference being applied in the Rejection) is insufficient to overcome a rejection, in accordance to the requirements of 37 CFR 1.111(c). Besides, the points raised against obviousness rationale are referred to section B.

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(E) As per claim 19, Applicants have submitted that Fig. 10 and 13 as cited do not meet the claimed 'markup version of ... automation control program' (Appl. Rmrks, pg. 44-47). There is not sufficient teaching from the language of the claim to support the above allegations; and it is deemed that Dole's tool to set up flow path for building functionality of a chip controller (as a integrated chip) along with using markup files to support the persisted design reads on the claimed features, notwithstanding the deficiencies exposed in the Claim Objections, i.e. no patentable weight being imparted to the 'controlling of' a programmable logic controller. The arguments about improper or incomplete grounds for obviousness rationale are referred to section B.

(F) As per claims 20-38, in light of the pattern of Applicants' response or arguments (Appl. Rmrks, pg. 50-69) which amounts to a repeat of the pattern discussed in section C, the Examiner's reply will be same as that of section C or B, accordingly.

(G) As per claim 39, Applicants' argument concerning the use of Dole's Fig. 10, 13 ( Appl. Rmrks, pg. 70-71) relies on presenting the same questions as set forth above in section C, or D; and the same Examination steps required (for a prima facie obviousness) as mentioned in section D. These fail to lay out deficiencies of Dole in informative manner and specific terms (with respect to a particular claimed feature) for Examiner to reply according the 37 CFR 1.111(c) rules. As per claim 40 and corresponding argument (Appl. Rmrks, pg. 72), refer to section C and/or D.

(H) Applicants have presented Dole's Figure in regard to claim 41 ( Appl. Rmrks, pg. 73-78), and have pasted Dole's related portions of disclosed text. Following which, the rebut takes form of questions as mentioned earlier in section C and/or D; thus, amounts to allegations for

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patentability that are deemed insufficient to overcome any grounds of rejection. The points raised against an allegedly improper obviousness rationale is referred back to section B.

(I) As per claims 42-50, in light of the pattern of Applicants' response or arguments (Appl. Rmrks, pg. 79-88), which amounts to a repeat of the pattern discussed in section C and/or D, the Examiner's reply will be same as that of section C or B, accordingly.

(J) As for the arguments against claims 51-52 (Appl. Rmrks, pg. 89-91), refer to section B.

(K) Applicants have submitted that the Office Action fails to address all the concerns specifically raised in the Applicant Response (Appl. Rmrks, pg. 91-97). In reply, it is remarked that the Office action response has addressed all the points raised by the current Arguments until the last page; and has set forth where the arguments being presented amount to mere allegations uncharacteristic of any form of response expected and required for a proper format in accordance and compliance to 37 CFR 1.111(c); and therefore it is deemed that the claims will stand as rejected in the Office Action, in view of the improprieties of the claim language as set forth above by way of Claim Objection or type 112 or 101 Claim Rejections. The impropriety in terms of being non-compliant to the rules of the MPEP USC §112 or statutory subject matter (e.g. describing how the claimed invention has been construed in terms of reasonable step action taken to yield a tangible and useful real-world result) can be summarized in this case, *inter alia*, as vagueness in reciting a *intended use* (e.g. adapted for controlling) in the absence of enabling specifics, which is analogous to presenting a *omnibus* claim for a feature (e.g. a computer program for controlling); or in reciting transporting a file across a network, the file having content described solely for an intended use.



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As a whole, the arguments are not convincing, and the claims stand rejected as set forth above.

***Conclusion***

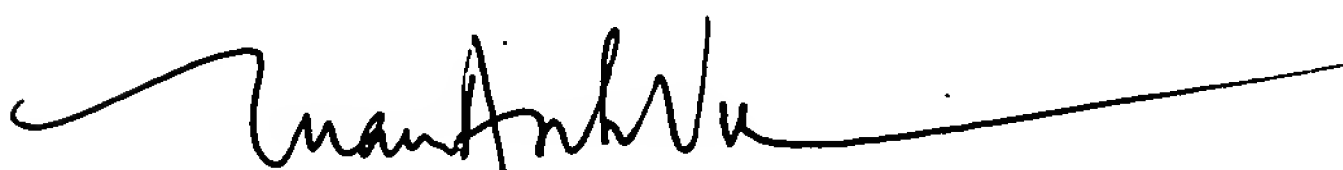
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 ( for non-official correspondence - please consult Examiner before using) or 571-273-8300 ( for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Tuan Anh Vu", with a long horizontal flourish extending to the right.

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Tuan A Vu

Patent Examiner,

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February 10, 2007